



W-MAX Plus 4X4 MIMO Base Station



Infrax System's family of wave 2 certified WiMAX products consists of highly integrated WiMAX Base Stations that provide fast, flexible, cost-effective WiMAX network deployment solutions where increased capacity and coverage is required.

All-in-one' architecture combined with simple, single-handed installation and fast rollout make these BSs an ideal solution for operators that want to get in on the ground floor of WiMAX deployment at significant CAPEX reductions and maximum return on their network deployment.

W-MAX Plus 4X4 MIMO Outdoor 802.16e Base Station

Adaptable WiMAX Platform

The WiMAX (W-MAX) Product Family is an extremely cost effective wireless solution for Service Providers and Telco's who are looking for fast, flexible, and easy to deploy WiMAX networks with increased capacity and coverage.

Sectorization Modes:

Dual Sectors 4x4 N=2



Single Sector 4x4



Quad Sectors N=4



FEATURES

HARDENED, RUGGED, UTILITY-GRADE ENCLOSURES

The Infrax W-MAX Series has been engineered from the ground up to withstand conditions in some of the harshest environments. The aluminum is powder coated white finish and the milled aluminum enclosure minimizes solar heat absorption, allowing uninterrupted operation in the world's hottest regions.

FLEXIBLE

W-MAX is available in:

Various frequencies in 2.3-2.7 GHz, 3.3-3.5 GHz.

Modular design will allow a variety of antenna types and combinations.

DYNAMIC BANDWIDTH ALLOCATION WITH ADAPTIVE POLLING

W-MAX base stations coordinate traffic flow from the clients through a polling mechanism, which constantly adapts itself based on client traffic avoiding the issues in traditional OFDM wireless networks where multiple clients transmitting data to a base station simultaneously will cause traffic collisions, necessitating retransmissions and reducing throughput.

POWERFUL

W-MAX offers an unparalleled combination of Range and Throughput

- 4 Integrated RF Cards 1W Per Port
- 4X4 MIMO gives a unique configurable Sectorization capability. A single unit can cover a single sector N=1 reuse, two sectors with N=2 reuse, or four sectors N=4.

HIGHER DATA RATES

W-MAX Plus has the ability to provide high throughputs with its advanced modulation and coding rates.

The Power to Secure The Future

W-MAX Plus 4X4 MIMO 802.16e-2009 Wave 2 Compliant Base Station

TECHNOLOGY:

- Channel Bandwidth selection of 5, 10 & 20 MHz is available for spectral efficiency
- Supports Bridge & QoS
- High Output power of 50dBm
- Integrated 4 RF Cards for 1W Per Port
- Over the Air Remote Firmware Upgrades
- Centralized NMS to monitor all the Radio elements in the Network
- Excellent QOS for SIP Based Communication
- Integrated GPS and Synchronization Circuit
- Supports Multiple Sectorization Modes
- Fast Network Roll Out and Capacity Increase
- Advanced MIMO Technologies
- Supports the Latest R6 Interface and GRE Tunneling to ASN-GW



Radio Specifications

Number of Sectors	Single, Dual, or Quad (with Frequency Reuse)
Frequency	2.3-2.7 GHz, 3.3-3.8 GHz (Other Frequencies are Optional)
FFT	512, 1024, 2048
FEC	Convolution Code & Turbo
Channel Bandwidth	3.5 MHz, 5 MHz, 7 MHz, 8.75 MHz, 10 MHz, (20 MHz Optional)
Duplex Method	TDD
Central Frequency Resolution	125 KHz
Sectorization modes	1x4x1 – Single unit - four MIMO (A/B) antennas – single sector 1x2x2 – Single unit – two MIMO 2x2 antennas per sectors – two sectors 1x1x4 – Single unit – Single SISO antenna per sector – four sectors
Modulation and coding rates	DL/UL: QPSK (1/2, 3/4), 16 QAM (1/2, 3/4), 64 QAM (2/3, 3/4, 5/6)(64 QAM is optional for UL)
Diversity Supported	4x4 MIMO A/B, STC, MRC
GPS	Integrated with external active antenna
Synchronization	Integrated GPS module with on board synchronization unit or external source synchronization. Optional: IEEE1588 or Backhauling self-synchronization

Standards Compliance

Safety	EN 60950-1, EN 60950-22
Environmental	IEC 60529-1, IP66
Radio	FCC Part 27
EMC	FCC Part 15, Class A
Certified WiMAX Forum IEEE802.16e-2009 Wave 2 and beyond	

Network

Network Management	SNMP v2, Standard & Proprietary MIB
System Configuration	SNMP, FTP, CLI
Firmware Upgrade	Remote TFTP for Firmware & Programming

Interfaces

Network Interfaces	2x10/100 BaseT, Optional 1xGE or optical interface SX/LX. Second Ethernet port for local and out-of-band management. Can also function as a serial port
Northbound Interface	Profile C, R6 with GRE tunnel per SF or Standalone proprietary mode. Optional: Profile B

Physical

Dimensions	39cm (L) x 24cm (W) x 12cm (H)
Weight	Less than 5 kg
Operating External Temperature	Industrial -40°C to 65° C
Operating humidity	5%-95% non-condensing
Power Source and Consumption	48VDC (operation range -36 to -72VDC); Max Power consumption 40Watts

The Power to Secure The Future